

SEQUENCE LISTING

SEQ ID NO:1

Mouse SSG amino acid sequence

5 MGELPFLSPEGARGPHINRGSLSSLEQGSVTGTEARHSLGVLHVSYSVSNRVGPWWNIKS
CQQKWDRQILKDVSLYIESGQIMCILGSSSGSKTTLLDAISGRLRRTGTLEGEVFNVCCE
LRRDQFQDCFSYVLQSDVFLSSLTVRETLRYTAMLALCRSSADFYNNKKVEAVMTELSLSH
VADQMIGSYNFGGISSGERRRVSIAAQLLQDPKVMMLDEPTTGLDCMTANQIVLLLAELA
RRDRIVIVTIHQPRSELFQHFQDKIAILTYGELVFCGTPEEMLGFFNNCGYPCPEHSNPF
10 FYMDLTSVDTQSREREIETYKRVQMLECAFKESDIYHKILENIERARYLKTLPMPVFKTK
DPPGMFGKLGVLRLRRVTRNLMRNKQAVIMRLVQNLIMGLFLIFYLLRVQNNLTKGAVQDR
VGLLYQLVGATPYTGMLNAVNLFPMRLAVSDQESQDGLYHKWQMLLAYVLHVLPFSVIAT
VIFSSVCYWTGLGLYPEVARFGYFSAALLAPHLIGEFLLTLVLLGIVQNPNIIVNSIVALLSI
SGLLIGSGFIRNIQEMPIPLKILGYFTFQKYCCEILVVNEFYGLNFTCGGSNTSMLNHPM
15 CAITQGVQFIEKTCPGATSRTANFLILYGFIPALVILGIVIFKVRDYLI SR

SEQ ID NO:2

Mouse SSG nucleotide sequence

20 GGGACAGGCCACTAGAAAATTCACCTTGCAATTTGCTTCCTGCTAGCCATGGGTGAGCTGCC
CTTTCTGAGTCCAGAGGGAGCCAGAGGGCCTCACATCAACAGAGGGTCTCTGAGCTCCCT
GGAGCAAGGTTTCGGTCACGGGCACAGAGGCTCGGCACAGCTTAGGTGTCCTGCATGTGTC
CTACAGCGTCAGCAACCGTGTCTGGGCCTTGGTGGAACATCAAATCATGCCAGCAGAAGTG
GGACAGGCAAATCCTCAAAGATGTCTCCTTGACATCGAGAGTGGCCAGATTATGTGCAT
25 CTTAGGCAGCTCAGGCTCAGGGAAGACCACGCTGCTGGACGCCATCTCCGGGAGGCTGCG
GCGCACTGGGACCCTGGAAGGGGAGGTGTTTGTGAATGGCTGCGAGCTGCGCAGGGACCA
GTTCCAAGACTGCTTCTCCTACGTCTGACAGAGCGACGTTTTTCTGAGCAGCCTCACTGT
GCGCGAGACGTTGCGATACACAGCGATGCTGGCCCTCTGCCGAGCTCCGCGGACTTCTA
CAACAAGAAGGTAGAGGCAGTCATGACAGAGCTGAGCCTGAGCCACGTGGCGGACCAAAT
30 GATTGGCAGCTATAATTTTGGGGGAATTTCCAGTGGCGAGCGGCGCCGAGTTTCCATCGC
AGCCCAACTCCTTCAGGACCCCAAGGTGATGCTAGATGAGCCAACACAGGACTGGA
CTGCATGACTGCAAATCAAATTGTCCTTCTCTTGGCTGAGCTGGCTCGCAGGGACCGAAT
TGTGATTGTCACCATCCACCAGCCTCGCTCTGAGCTCTTCCAACACTTCGACAAAATTGC
CATCCTGACTTACGGAGAGTTGGTGTCTGTGGCACCCCAGAGGAGATGCTTGGCTTCTT

CAATAACTGTGGTTACCCCTGTCCTGAACATTCCAATCCCTTTGATTTTTACATGGACTT
 GACATCAGTGGACACCCAAAGCAGAGAGCGGGAAATAGAAACGTACAAGCGAGTACAGAT
 GCTGGAATGTGCCTTCAAGGAATCTGACATCTATCACAAAATTCTGGAGAACATTGAAAG
 AGCACGATACCTGAAAACCTTACCCATGGTTCCTTTCAAACAAAAGATCCTCCTGGGAT
 5 GTTCGGCAAGCTTGGTGTCTGCTGAGGCGAGTAACAAGAACTTAATGAGGAATAAGCA
 GGCAGTGATTATGCGTCTCGTTCAGAATCTGATCATGGGCCTCTTCCTCATTTTTCTACCT
 TCTCCGCGTCCAGAACAACACGCTAAAGGGCGCTGTGCAGGACCGCGTGGGGCTGCTCTA
 TCAGCTTGTGGGTGCCACCCCATACACCGGCATGCTCAATGCTGTGAATCTGTTTCCCAT
 GCTGAGAGCCGTCAGCGACCAGGAGAGTCAGGATGGCCTGTATCATAAGTGGCAGATGCT
 10 GCTCGCCTACGTGCTACACGTCCTCCCCTTCAGCGTCATCGCCACGGTCATTTTCAGCAG
 TGTGTGTTATTGGACTCTGGGCTTGATCCTGAAGTTGCCAGATTTGGATATTTCTCTGC
 TGCTCTTTTGGCCCCCTCACTTAATTGGAGAATTTCTAACACTTGCTGCTGGTATAGT
 CAAAACCCCTAATATTGTCAACAGTATAGTGGCTCTGCTCAGCATCTCTGGGCTGCTTAT
 TGGATCTGGATTTATCAGAAACATACAAGAAATGCCCATTCCTTTAAAAATCCTGGGTTA
 15 TTTTACATTCCAAAATACTGTTGTGAGATTCTCGTGGTCAATGAGTTTTACGGCCTGAA
 CTTCACTTGTGGTGGATCCAACACCTCTATGCTAAATCACCCGATGTGCGCCATCACCCA
 AGGGGTCCAGTTCATCGAGAAAACCTGCCCAGGTGCTACATCCAGATTCACGGCAAACCT
 CCTCATCTTATATGGGTTTATCCCAGCTCTGGTCATCCTAGGAATAGTGATTTTTTAAAGT
 CAGGGACTACCTGATTAGCAGATAGTTAAGATGACAGGCAGGAAAGGGTTAATGGGCAGG
 20 CACGCCCCTGTGGAGCACAGAGAAGTACTGTCTTCAACCATCAGGATTCCATCTGCGAC
 CCTTGTGTCTGACCCTTGTGTCTATCCGGAGCCCCAAGGGCAACGAGAACTCACAGCCCT
 CTGCTATTCCAGCTTGTGGGGCAATGTGGTGCTTGGACATTGTGACTGAACTGGTCCAAT
 AATGTAAATAATAATAATTCATAAACCTACAGGACATT

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SEQ ID NO:3

Human SSG amino acid sequence

MGDLSLTPGGSMGLQVNRGSQSSLEGAPATAPEPHSLGILHASYSVSHRVRPWWDITSC
 30 RQQWTRQILKDVSLYVESGQIMCILGSSSGSKTTLLDAMSGRLGRAGTFLGEVYVNGRAL
 RREQFQDCFSYVLQSDTLLSSLTVRETLHYTALLAIRRGNPGSFQKKVEAVMAELSLSHV
 ADRLIGNYSLGGISTGERRRVSIAAQLLQDPKVMLFDEPTTGLDCMTANQIVVLLVELAR
 RNRIVVLTIIHQPRSELFQLFDKIAILSFGELIFCGTPAEMLDFFNDGYPCEHSNPFDF
 YMDLTSVDTQSKEREIETSKRVQMIESAYKKSACHKTLKNIERMKHLKTLPMVPFKTKD

SPGVFSKLGVLRRVTRNLVRNKLAVITRLLQNLIMGLFLLFFVLRVRSNVLKGAIQDRV
 GLLYQFVGATPYTGMLNAVNLFPVLRAVSDQESQDGLYQKWQMMMLAYALHVLPPFSVVATM
 IFSSVCYWTGLGLHPEVARFGYFSAALLAPHLIGEFLLTLVLLGIVQNPNIIVNSVALLSIA
 GVLVSGFRLNIQEMPIPFKIIISYFTFQKYCSEILVVNEFYGLNFTCGSSNVSVTTNPMC
 5 AFTQGIQFIEKTCPGATSRFTMNFLILYSFIPALVILGIVVFKIRDHLISR

SEQ ID NO:4

Human SSG nucleotide sequence

10 GTCAGGTGGAGCAGGCAGGGCAGTCTGCCACGGGCTCCCCAACTGAAGCCACTCTGGGGA
 GGGTCCGGCCACCAGAAAATTTGCCCAGCTTTGCTGCCTGTTGGCCATGGGTGACCTCTC
 ATCTTTGACCCCCGGAGGGTCCATGGGTCTCCAAGTAAACAGAGGCTCCCAGAGCTCCCT
 GGAGGGGGCTCCTGCCACCGCCCCGGAGCCTCACAGCCTGGGCATCCTCCATGCCTCCTA
 15 CAGCGTCAGCCACCGCGTGAGGCCCTGGTGGGACATCACATCTTGCCGGCAGCAGTGGAC
 CAGGCAGATCCTCAAAGATGTCTCCTTGACGTGGAGAGCGGGCAGATCATGTGCATCCT
 AGGAAGCTCAGGCTCCGGGAAAACACGCTGCTGGACGCCATGTCCGGGAGGCTGGGGCG
 CGCGGGGACCTTCCTGGGGGAGGTGTATGTGAACGGCCGGGCGCTGCGCCGGGAGCAGTT
 CCAGGACTGCTTCTCCTACGTCTGCAGAGCGACACCTGCTGAGCAGCCTCACCGTGCG
 20 CGAGACGCTGCACTACACCGCGCTGCTGGCCATCCGCCGCGGCAATCCCGGCTCCTTCCA
 GAAGAAGGTGGAGGCCGTCATGGCAGAGCTGAGTCTGAGCCATGTGGCAGACCGACTGAT
 TGGCAACTACAGCTTGGGGGGCATTTCACGGGTGAGCGGCGCGGGTCTCCATCGCAGC
 CCAGCTGCTCCAGGATCCTAAGGTCATGCTGTTTGATGAGCCAACCACAGGCCTGGACTG
 CATGACTGCTAATCAGATTGTCGTCTCCTGGTGGAACTGGCTCGCAGGAACCGAATTGT
 25 GGTTCACCATTCACAGCCCCGTTCTGAGCTTTTTTCAGCTCTTTGACAAAATTGCCAT
 CCTGAGCTTCGGAGAGCTGATTTTCTGTGGCACGCCAGCGGAAATGCTTGATTTCTTCAA
 TGAAGTGGGTTACCCTTGTCCTGAACATTCAAACCTTTTGAAGTCTATATGGACCTGAC
 GTCAGTGGATACCCAAAGCAAGGAACGGGAAATAGAAACCTCCAAGAGAGTCCAGATGAT
 AGAATCTGCCTACAAGAAATCAGCAATTTGTCATAAACTTTGAAGAATATTGAAAGAAT
 30 GAAACACCTGAAAACGTTACCAATGGTTCCTTTCAAACCAAAGATTCTCCTGGAGTTTT
 CTCTAAACTGGGTGTTCTCCTGAGGAGAGTGACAAGAACTTGGTGAGAAATAAGCTGGC
 AGTGATTACGCGTCTCCTTCAGAAATCTGATCATGGGTTTGTTCTCCTTTTCTTCGTTCT
 GCGGGTCCGAAGCAATGTGCTAAAGGGTGCTATCCAGGACCGCGTAGGTCTCCTTTACCA
 GTTTGTGGGCGCCACCCCGTACACAGGCATGCTGAACGCTGTGAATCTGTTTCCCGTGCT

GCGAGCTGTCAGCGACCAGGAGAGTCAGGACGGCCTCTACCAGAAGTGGCAGATGATGCT
 GGCCTATGCACTGCACGTCCTCCCCCTTCAGCGTTGTTGCCACCATGATTTTCAGCAGTGT
 GTGCTACTGGACGCTGGGCTTACATCCTGAGGTTGCCCGATTTGGATATTTTTCTGCTGC
 TCTCTTGGCCCCCACTTAATTGGTGAATTTCTAACTCTTGTGCTACTTGGTATCGTCCA
 5 AAATCCAAATATAGTCAACAGTGTAGTGGCTCTGCTGTCCATTGCGGGGGTGCTTGTG
 ATCTGGATTCCCTCAGAAACATACAAGAAATGCCCATTCCTTTTAAAATCATCAGTTATTT
 TACATTCCAAAAATATTGCAGTGAGATTCTTGTAGTCAATGAGTTCTACGGACTGAATTT
 CACTTGTGGCAGCTCAAATGTTTCTGTGACAATAATCCAATGTGTGCCTTCACTCAAGG
 AATTCAATTCATTGAGAAAACCTGCCCAGGTGCAACATCTAGATTCACAATGAACCTTCT
 10 GATTTTGTATTCAATTTATTCCAGCTCTTGTCTATCCTAGGAATAGTTGTTTTCAAATAAG
 GGATCATCTCATTAGCAGGTAGTGAAAGCCATGGCTGGGAAAATGGAAGTGAAGCTGCCG
 ACTGTGCATGACTGCTCTGAACGTCTGAAATGAGAGTGCCATGTATTTCTTTCTTGACAG
 GACATCTCAAGTCTTTTAACCATTAAGACTCCATTTGTGCCTCTTGGATCCAAGCAGGCC
 TTGAATGCAATGGAAGTGGTTTATAGTCCCTTGCTCTTACAACTTGCAGGGACATGTGGT
 15 TATTTGGAAATTGTGACTGAGCGGACCCAAGAATGTAAATAATATTCATAAACCTATGGG

SEQ ID NO:5

SSG signature sequence 1

20

AALLAPHLIGEFLTLVLL

SEQ ID NO:6

25 SSG signature sequence 2

FIPALVILGIV

SEQ ID NO:7

30 Exon 1 of hSSG

GTCAGGTGGAGCAGGCAGGGCAGTCTGCCACGGGCTCCCCAACTGAAGCCACTCTGGGGA
 GGGTCCGGCCACCAGAAAAATTTGCCAGCTTTGCTGCCTGTTGGCCATGGGTGACCTCTC
 ATCTTTGACCCCCGGAGGGTCCATGGGTCTCCAAGTAAACAGAGGCTCCCAGAGCTCCCT

GGAGGGGGCTCCTGCCACCGCCCCGGAGCCTCACAGCCTGGGCATCCTCCATGCCTCCTA
CAGCGTCAG

5 **SEQ ID NO:8**

Exon 2 of hSSG

CCACCGCGTGAGGCCCTGGTGGGACATCACATCTTGCCGGCAGCAGTGGACCAGGCAGAT
CCTCAAAGATGTCTCCTTGTACGTGGAGAGCGGGCAGATCATGTGCATCCTAGGAAGCTC

10 AG

SEQ ID NO:9

Exon 3 of hSSG

15 GCTCCGGGAAAACCACGCTGCTGGACGCCATGTCCGGGAGGCTGGGGCGCGCGGGGACCT
TCCTGGGGGAGGTGTATGTGAACGGCCGGGCGCTGCGCCGGGAGCAGTTCCAGGACTGCT
TCTCCTACGTCCTGCAG

SEQ ID NO:10

20 Exon 4 of hSSG

AGCGACACCCTGCTGAGCAGCCTCACCGTGCGCGAGACGCTGCACTACACCGCGCTGCTG
GCCATCCGCCCGCGGCAATCCCGGCTCCTTCCAGAAGAAGGTGG

25 **SEQ ID NO:11**

Exon 5 of hSSG

AGGCCGTCATGGCAGAGCTGAGTCTGAGCCATGTGGCAGACCGACTGATTGGCAACTACA
GCTTGGGGGGCATTTCACGGGTGAGCGGCGCCGGGTCTCCATCGCAGCCCAGCTGCTCC

30 AGGATCCTA

SEQ ID NO:12

Exon 6 of hSSG

AGGTCATGCTGTTTGTATGAGCCAACCACAGGCCTGGACTGCATGACTGCTAATCAGATTG
TCGTCTCCTGGTGGAAGTGGCTCGCAGGAACCGAATTGTGGTTCTCACCATTACCAGC
CCCGTTCTGAGCTTTTTCAG

5 **SEQ ID NO:13**

Exon 7 of hSSG

CTCTTTGACAAAATTGCCATCCTGAGCTTCGGAGAGCTGATTTTCTGTGGCACGCCAGCG
GAAATGCTTGATTTCTTCAATGACTGCGGTTACCCTTGTCTGAACATTCAAACCCTTTT
10 GACTTCTATA

SEQ ID NO:14

Exon 8 of hSSG

15 TGGACCTGACGTGAGTGGATACCCAAAGCAAGGAACGGGAAATAGAAACCTCCAAGAGAG
TCCAGATGATAGAATCTGCCTACAAGAAATCAGCAATTTGTCATAAACTTTGAAGAATA
TTGAAAGAATGAAACACCTGAAAACGTTACCAATGGTTCCTTTCAAACCAAAGATTCTC
CTGGAGTTTCTCTAAACTGGGTGTTCTCCTGAG

20 **SEQ ID NO:15**

Exon 9 of hSSG

GAGAGTGACAAGAACTTGGTGAGAAATAAGCTGGCAGTGATTACGCGTCTCCTTCAGAA
TCTGATCATGGGTTTGTTCCTCCTTTTCTTCGTTCTGCGGGTCCGAAGCAATGTGCTAAA
25 GGGTGCTATCCAGGACCGCGTAGGTCTCCTTTACCAGTTTGTGGGCGCCACCCCGTACAC
AGGCATGCTGAACGCTGTGAATCTGT

SEQ ID NO:16

Exon 10 of hSSG

30 TTCCCGTGCTGCGAGCTGTCAGCGACCAGGAGAGTCAGGACGGCCTCTACCAGAAGTGGC
AGATGATGCTGGCCTATGCACTGCACGTCCTCCCCTTCAGCGTTGTTGCCACCATGATTT
TCAGCAGTGTGTGCTACTG

SEQ ID NO:17

Exon 11 of hSSG

5 GACGCTGGGCTTACATCCTGAGGTTGCCCATTGATATTTTCTGCTGCTCTCTTGGC
CCCCACTTAATTGGTGAATTTCTAACTCTTGTGCTACTTGGTATCGTCCAAAATCCAAA
TATAGTCAACAGTGTAGTGGCTCTGCTGTCCATTGCGGGGGTGCTTGTTGGATCTGGATT
CCTCAG

SEQ ID NO:18

10 Exon 12 of hSSG

AAACATACAAGAAATGCCCATTCCTTTTAAAATCATCAGTTATTTTACATTCCAAAATA
TTGCAGTGAGATTCTTGTAGTCAATGAGTTCTACGGACTGAATTTCACTTGTG

15 **SEQ ID NO:19**

Exon 13 of hSSG

GCAGCTCAAATGTTTCTGTGACAATAATCCAATGTGTGCCTTCACTCAAGGAATTCAAT
TCATTGAGAAAACCTGCCAGGTGCAACATCTAGATTACAATGAACTTTCTGATTTTGT
20 ATTCATTTATTCCAGCTCTTGTCATCCTAGGAATAGTTGTTTTCAAATAAGGGATCATC
TCATTAGCAGGTAGTGAAAGCCATGGCTGGGAAAATGGAAGTGAAGCTGCCGACTGTGCA
TGACTGCTCTGAACGTCTGAAATGAGAGTGCCATGTATTTCTTTCTTGACAGGACATCTC
AAGTCTTTTAACCATTAAAGACTCCATTTGTGCCTCTTGGATCCAAGCAGGCCTTGAATGC
AATGGAAGTGGTTTATAGTCCCTTGCTCTTACAACCTGCAGGGACATGTGGTTATTTGGA
25 AATTGTGACTGAGCGGACCCAAGAATGTAAATAATATTCATAAACCTATGGG